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(54) Title: METHOD FOR EFFICIENT TRANSPORT OF SMALL LIQUID VOLUMES TO, FROM OR WITHIN MICROFLUIDIC DEVICES

(57) Abstract: Methods are presented for realizing zero-dispersion segmented flow for transfer of small microfluidic samples onto or within microfluidic analysis or processing devices. Where fluidic systems are in whole or in part made of materials unfavorable to the zero-dispersion conditions for an indicated solvent/carrier fluid system, the system may be covalently coated to impart the necessary surface properties. This invention is demonstrated in an embodiment where 1 microliter samples are robotically prepared and transferred through 3 meters of capillary tubing to a microcoil NMR probe.